

MISSIONS AND RESPONSIBILITIES

of the

OFFICE OF RESEARCH AND DEVELOPMENT

UN 1-23, published 30 July 1982, placed the responsibility on the Deputy Director (Research) to conduct in depth research and development in the scientific and technical fields to support intelligence collection by advanced technical means. This was to be exclusive of those research and development activities to support agent operations, NPIC, and the Office of Communications. In order to provide a capability to accomplish this mission, the Office of Research and Development has been formed in concept. While a preliminary Table of Organization and budget have been approved, the necessary manpower slots, funds, and physical space have not been authorized.

At present, the mission of the Office of Research and Development is conceived to be that of developing intelligence applications from technological discoveries, the operation of such applications and the conception of ways and methods by which operational analysis may maximize the effectiveness of such collection operations. In order to accomplish this, the ORD will have three major divisions, which are discussed below.

Research Division

The Research Division will be concerned with the broad scope of science and the capability of new advances or concepts to be utilized for intelligence purposes, without being restricted to specific collection problems. The Division will administer a program of external research projects to advance the state of the art in possible collection techniques. The products of this Division may be applicable to the mission of other Agency components as well as major technical operations of the Deputy Director (Research). Following are a number of specific examples:

a. Major emphasis in the Research Division will be external research contracts in support of the CIA overhead reconnaissance program. Some examples are:

(1) New optical systems leading to greatly improved target resolution through the use of optics or color film.

(2) The use of high-powered lasers for the development of a night photographic capability.

(3) Innovations in new scientific methods of reducing radar cross section.

b. A second area of interest within this division will be in the field of the physical sciences in support of the DD/R responsibility in SIGINT. Major emphasis here will be in the fields of electronics, solid state physics, and chemistry leading to major advances in the state of the art for electronic equipment. For example, thin film techniques will be developed to a state suitable for use by Office of ELINT in providing a major reduction in size and power requirement of agent ELINT equipment.

c. Another main area of interest within the Research Division will be external contracts on basic research leading to innovations to new advanced technical collection systems not covered in a and b, above. This will include research in chemistry in support of the BW - CW collection program, research in acoustic and seismic phenomena leading to missile intelligence collection systems, research in electromagnetic propagation paths leading to missile and SIGINT collection systems.

A total of ■ slots have been requested for this Division, of which ■ will be scientific personnel. This is a relatively small number of people, considering the entire spectrum of scientific disciplines involved. The number of contracts monitored will be large, in that most of them will be relatively small in dollar size.

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Systems Division

The Systems Division will be responsible for translating promising new ideas not falling within the purview of OSA or OEL into technical collection systems including procurement, testing, fielding and manning of such systems against specific collection targets. This Division will also conduct research and development on new ideas, concepts and techniques against specific collection requirements as opposed to the broad uncommitted research of the Research Division. The objectives of this Division will be accomplished largely through a program of external research.

The Systems Division is conceived to consist of two major subdivisions. The first, tentatively titled Concepts Branch, is concerned with applying the present state of the art to collection problems to determine feasibility. Industry generates a large number of technical proposals for new collection systems. Most of these must be taken with a grain of salt, and quite often the best parts of several should be combined to make the optimum system. This would be a responsibility of the Concepts Branch. This branch is also responsible to be knowledgeable of the U. S. applied research in scientific areas in which new technical collection systems may be feasible. In this case, they would contract with selected companies, not having a vested interest, to technically evaluate these new ideas. Such an example is the use of seismic signals as a technical collection tool against missile launch sites.

The Projects Branch, the second sub-unit of the Systems Division, is conceived to be the unit which actually fields these technical collection systems. This involves arranging for equipment development, contractual field support, and deployment. Real estate arrangements and host country arrangements will be coordinated and conducted through the DE/P. Tasking, communications, and data return and analysis are also the responsibility of this unit. Such an example is Project [REDACTED] now on station in [REDACTED]. This project requires the full-time services of a CIA technical field engineer in [REDACTED] as well as a full-time technical individual in Headquarters for tasking and data reduction. There are at present several other developed technical collection concepts ready for possible field deployment now under development in TSD.

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Again, [redacted] personnel have been requested for this Division. These spaces include all of the overseas field slots.

Analysis Division

The Analysis Division, unlike Research and Systems, will be primarily an in-house activity. This unit will concern itself with collection target systems analysis. The highest priority intelligence collection targets are really complex systems and there are many ways to approach the collection aspect. By a judicious combination of collection efforts against a given target system it is possible to obtain the maximum return for the minimum investment. Too often collection is made on what is apparently easily feasible and not against what really should be collected. This unit will have the responsibility for breaking down large systems and analyzing the weakness of these systems to collection. Various collection methods and concepts would be proposed. The actual collection efforts resulting from such analysis would be carried out in the Systems Division, or in CSA, OEL, or the DD/P.

A very complex system against which little has been accomplished so far, and needs considerable analysis effort, is the Russian effort in antiballistic missile development. Here analysis will be made of possible methods of collection against the research and development programs, against the field testing ranges, and against the actual deployment program. A second example, which will soon require major effort, is an analysis of the Russian anti-satellite system. This will be required in order to again provide for the maximum intelligence collection capabilities. A correlated benefit from this program is information for CSA which will provide them with methods of accomplishing development of a covert satellite system.

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[redacted] have been requested for this Division, of which [redacted] will be scientists. While this Division will have a certain amount of contract support, it is believed necessary and so intended that they themselves do much of this analysis. The complexity and delicate interactions of intelligence collection systems are such that major contracting to industry is not really feasible nor desirable. This is one area in which you must know what you are talking about. 25X1A1a

The distinction between the missions of Office of Special Activities, Office of Research and Development, and Office of MAINT lies in the responsibility of ORD for innovations whereas OSA and OLI are primarily concerned with the developmental, procurement, and application aspects.

An open ended mission such as that of ORD requires that a considered judgment be used in deciding on the level of effort. There is, however, a minimum effort both in funds and personnel below which little can be expected. The level of effort must be weighed against the over-all community effort and against the advances possible from successful application of science. It is the considered opinion of the Deputy Director (Research) that the resources requested for the Office of Research and Development are indeed the minimum required for an innovative program in science and technology. Certainly when weighed against the Agency's roles and missions and total budget structure, this must be so.

A very important but somewhat elusive point is that in trying to induce very capable scientists to join the Agency, it is necessary to explain to them the real situation. They must see what sort of an organization they are joining, its grade structure, its roles and missions, its size, funding structure and physical location. It is unfortunately necessary to start such a package from the total concept, and it is very dangerous to let it grow like Topsy, fighting for each space, dollar, and physical facility. When any industrial organization decides to go into science in a major way, this is the approach taken. Witness the large number of very major new technical organizations springing up in industry in this package fashion.